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De menselijke factor in de bedrijfshuishouding en de bedrijfseconomische problematiek

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SUMMARY

This study deals with the human factor in business in relation to the problems in business economics. For a fruitful treatment we have been guided by a central principle. This principle, derived from the foundations of society-structure in the Western countries and introduced in business economics literature by Professor Dr J. L. MEY, has reference to the economic independent character of the business institution. From this principle originates logically the primacy of the economic objective of business.

The study is divided into three main parts.

The *first part* deals with the problem of the human factor in business. It was necessary to have a clear conception of what is meant by „human factor in business“. By the human factor in business we may understand the psychological and sociological aspects of the phenomena which the employment of manpower involves. This is a narrow interpretation of the concept. In psychological and sociological handbooks we read that business economics literature does not, sufficiently take into account the essential meaning of the human factor in business. Therefore it was important to examine two questions: 1. Is it necessary for the human factor — in the narrow sense — to be included in a theory of business economics? 2. What is the essential importance for business economics of psychological and sociological investigations in business? (the latter question will be dealt with in part III of this study).

In order to find an answer to the first question we examined the literature on this problem, especially the german literature on business economics (SCHÄFER, SMITT, LEHMANN). Next we compared the object of the science of business economics with the object of industrial psychology and industrial sociology. Our conclusion with regard to the first question above mentioned, is that it is neither necessary, nor desirable to include in the theory of business economics the human factor in business in the narrow sense.

We can however define the concept of the human factor in business in a broader sense. By the human factor in business we may understand all phenomena which the employment of manpower

involves. These phenomena have — as may be evident — several aspects; of these the economic, psychological and sociological aspects come most into prominence in the present circumstances. These aspects are the special objects of investigation of the science of business economics, industrial psychology and industrial sociology.

In our opinion it is necessary to integrate the results of the investigations in these aspects („industrial relations”). These integrations are an important foundation for the policy of management with regard to the above mentioned phenomena.

In the study of industrial relations we can distinguish the following stages:

1. the stage of investigations on the part of exponents of one or another of the social disciplines (economics, psychology, sociology, anthropology);
2. the stage of the individual case-studies;
3. the stage of quantitative investigations, in this case, an approach more inclusive than that of a single discipline.

The second stage in industrial relations showed its greatest weakness in its failure to divorce the study of the process of industrial relations from narrow disciplinarian lines, in its emphasis upon unique cases, in which differences are frequently greater than similarities and in the absence of measurement of factors and conditions described (subjective character).

The essence of the third stage in industrial relations is its quantitative character. A fruitful study in industrial relations should be undertaken according to the following lines:

1. determination of a great many hypotheses (primary factors);
2. measurement of the primary factors;
3. description and verification of functional relationships.

In chapter II we analyse the character of the human factor in business, in order to relate this factor with the problems in business economics. The analyses in psychological and sociological literature are not suited for our purpose: relating the human factor in business with the problems in business economics.

The criticism of MILLER and FORM on MAYO and ROETHLISBERGER, who have been accused of a „pro-management bias” in their investigations, is not correct, because MILLER and FORM neglect the primacy of the economic objective of the business institution.

Also KUYLAARS’ description and explanation of the „internal productivity” of labor cannot satisfy us. The kind of work — in

the study of KUYLAARS a central point — is only one of the sub-factors of the human factor in business.

In our opinion the character of the human factor in business can be described by means of an enumeration of some main categories. These categories are:

1. the reward of labor and the employment-time;
2. the kind of work;
3. co-operation in business;
4. management and policy in business;
5. partnership in business.

These categories evolve from the satisfaction of wants (1, 5), the physical state of the labourer (2), „man as social creature” (3) and „self-respect of man” (4). It is clear that in each of these categories a differentiation is possible.

From these categories it is easy to derive the desires of the labourers. These desires are related to the reward and employment-time of labor, the kind of work, co-operation in business, management and policy in business and partnership in business.

It is obvious that all the categories of the human factor in business can be reduced to the fact that manpower is connected with the person of the labourer and it is clear that employment of manpower differs fundamentally from the employment of inanimate factors of production.

The extent to which management meets the demands of the labourers determines the morale-index of the collectivity of labor and has influence on the productivity of labor. The determination of the morale-index is possible by an examination of the attitude of the labourers to business. It is necessary to give the labourers a questionnaire, in order to know what they think about their life and work in business. The questions have to be related to the reward and employment-time of labor, the kind of work, co-operation, kind of supervision, communication, physical labor conditions, management and policy in business and the profit of business. It is obvious that the computation of the morale-index is only possible by responses of the labourers to the questions and that in these responses irrational elements are included. The significance of the morale index, though in some respects an important datum for the management, may therefore not be exaggerated.

In the *second part* of our study the human factor in business is related to the problems in business economics, by dealing with:

- a.* the relation between labor-output and the reward of labor;
- b.* business organisation and the problem of the right of say of the labourers;
- c.* the theory of profit and the problem of profitsharing by labourers.

ad *a.* We can divide the determinants of labor-output into three main groups: first, factors rooted in the labourer; second, factors rooted in the reward of labor and finally, factors rooted in the method of production.

With regard to the first group of factors we emphasized the factor labor-capacity and the factor labor-willingness. The labor-willingness depends on the relation of the labourer to the object of work (kind of work), the morale of labor-collectivity and the reward-function, i.e. the relation between labor-output and labor-reward. With regard to this relation we disregarded the different wage-systems, in practice in use. Essentially total reward of labor is a linear function of the reward of one unit of output and the amount of output. As in each wage-system a minimum part is included, which part is independent of actual output, but dependent on the standard output, it is the latter which causes a complication in the reward-function. In order to grasp this function, we have to realise what is the meaning of standard output and of the parameter in the reward-function.

Standard-output can be fixed by different methods. In the first place we can fix the standard-time, i.e. time which is necessary to produce one unit of output. In the second place standard-quantity of output can be fixed, i.e. the amount of output produced in one unit of time. Both methods are essentially the same: their results are reciprocated. Motion- and time study is the instrument with which standard-time can be fixed. Though in motion- and time study subjective elements are included, we have through this instrument a reliable basis for an objective wage-system and with its help grievances can be reduced to a minimum. In our opinion the objections to motion- and time study, especially by psychologists and sociologists are not correct. Motion- and time study cannot be condemned by the method itself, but these studies have to be judged in connection with the purpose of the method.

The parameter in the reward-function must fulfil the following requirements: 1. be fixed in an objective way, 2. be of an equal amount for the same tasks and 3. be fixed in such a way that the

labourer, who only has to perform the most elementary tasks, receives a sufficient reward for his maintenance.

In order to meet the requirement sub 2, job evaluation is well established in practice; the other requirements can be met by the wage-policy of business as well as of government.

Besides the element of wages, which is related to the output of labourer (with a minimum reward included), there is an other element in wages, which is related to the merit of the labourer for business. In our opinion the graphic rating scale in merit rating is a reliable instrument to determine this merit element of wages. The forced-choice-method — a method which is characterised by the fact that the rater does not know the meaning of the factors, which have been rated — has the merit of being more objective, but its drawback lies in the fact that the results of merit rating cannot be discussed with labourers.

Thus far our analysis neglected the circumstance that business is always confronted with uncertainty. As far as we are concerned with the problem this uncertainty is manifested in the labor-capacity, labor-willingness and in the extent to which management can use labor-capacity. The extent of the uncertainty in labor-capacity can be reduced by a selection- and training procedure; the uncertainty in labor-willingness can be reduced by a correct application of the reward-function and by all these factors which create a high morale-index.

We cannot say that the total reward of labor, as derived from the reward-function, and the costs of production are identical. If management uses standard costs for the calculation — in accordance with the theory of replacement value —, differences in wages, caused by differences in labor-capacity and in labor-willingness, are eliminated from the cost price. So the price of a product is independent of all differences in labor-output. Now it is possible that standard-output in the reward-function differs from standard-output in cost-calculation. In our opinion, however, it is necessary that standard-output in the reward-function is equal to the standard-output in cost-calculation.

The sacrifices connected with the employment of manpower, are of a constant character. That means that funds have to be created for the maintenance of labor. The contribution to these funds by business has to be seen as a sacrifice of production in business; they are costs of production as far as these sacrifices are foreseen and connected with the actual production process.

ad *b*. With regard to the problem of the right of say of the labourers, we analysed first the structure of business organisation. In business

organisation we observe specialization, differentiation, lay-out and seasoning. These factors are essentially of the same character as we can observe in the economic organisation-structure of the society. There is however in business organisation a special power, which is rooted in the difference between management and performance. From this power originates the hierarchy, that is a system of levels in business organisation, and functionalisation, i.e. the specialisation of management in the different elements of task-performance.

Business organisation is to be thought of as a logical system of allocating responsibility, authority, and accountability within each part of the group. These three concepts are derived from the concept function. In business organisation we observe the process of centralisation and decentralisation of responsibility, authority and accountability. This process is accompanied by the process of delegation from top to bottom of the organisation.

With these categories and processes in the background we have to realise the character of the problem of right of say of the labourers. By the right of say of the labourers we understand: taking part in managerial decision-making. This concept differs fundamentally from that of participation. By participation of the labourers we understand that they are notified and have an advisory voice in management-decisions.

In our opinion the integral responsibility is rooted in top-management; via the process of delegation (and redelegation) all functionaries on lower levels receive orders. These orders ought to be executed in accordance with the rules and conditions laid down by management. All these functionaries are accountable for their performance to the top-management. Top-management is accountable to the owners of business (share-holders). The nature of authority lies in the legal right of ownership of share-holders. This right is delegated to top-management. It is top-management that is bearer of the over-all-responsibility.

From the above analysis it follows, in our opinion, that management cannot delegate the right of say to labourers. Though labourers are also bearers of responsibility and authority, they never can bear integral responsibility. Within limits, fixed by the management, it is of course, not only possible but also necessary to delegate to labourers initiative in the method of performance of their tasks.

If however we consider the concept of participation by labourers, our conclusion will be quite different from the one just drawn. In our opinion a promotion of the economic purpose of business

institution, necessarily implies participation in the sense mentioned above. Budgeting in business is an instrument with two fundamental functions: First, an economic (rational) function, i.e. a means to delegate responsibility and authority, and a means to co-ordination of all activities in business. Second, a participating function, i.e. all functionaries participate in the preparation of tasks which have to be performed. It is not possible, nor necessary to keep these two functions completely apart: they complement each other. So a budget, without an economic function (without task-setting) is of no value in business and also a budget with only task-setting by management is of little value. It is however necessary — it follows from bearing the integral responsibility — that only top-management declares the budget binding. By budget-check top-management has insight in the extent in which and how all functionaries have performed their tasks.

If the budget plays an essential part in business and if both functions — the economic and the participating one — have been adequately taken into account, then, in our opinion, the problem of right of say of labourers, is not urgent, because all functionaries can find satisfaction in their work, as co-partners in business.

ad *c*. With regard to the problem of profit sharing by labourers, it is, in our opinion, necessary to analyse first the function of profit in business. About the precise meaning of profit in business there is no communis opinio. This is caused by an incorrect insight in the nature of the concept of cost. In our analysis we have based ourselves on the difference between sacrifices of production and cost of production. Sacrifices are — according to J. L. MEY — only costs in so far as these sacrifices are foreseen and in so far as they are in a quantitative sense related to the process of production. From this analysis follows that not all sacrifices of production are costs of production and that not all sacrifices of production can be taken into the calculation of the cost of a product. Moreover there are sacrifices of production which cannot be calculated as cost of product, because they are unknown at the moment of calculation, or unknown at the moment of computation of profit. All these sacrifices, which are not calculated in the cost of a product, ought to be taken into account, when the selling-price is fixed. In other words, profit has a real function: namely to cover all sacrifices of production, which are not calculated in the cost price of the product.

There is another function of profit: the share-holders are the

ultimate bearers of uncertainty in business; a part of the profit must be paid to the share-holders.

From this analysis follows further that it is not correct to tax that part of the profit which has been created for the fulfilment of the functions mentioned above. Only that part of the profit, which does not have a real function can be taxed. As far as profit does not have a real function we can speak of profit without function. This part can be paid to share-holders, though this part has no rational function.

There is however a difficulty. We cannot sharply distinguish between those two parts of profit. Their limits fluctuate. The function-part of profit has in essence an *ex ante* character and only *ex post* it can be calculated. Hence, it is possible that the *ex ante* function-part of profit is *ex post* without function. Nevertheless it is, in our opinion, necessary to keep clearly in mind the distinction between the two parts of profit.

This analysis of the nature of profit has to be placed against the problem of profit sharing by labourers. The main arguments in favour of profit sharing by labourers are: 1. stimulation of labour-output, 2. strengthening of the tie between management and labor, which causes: *a.* efficient co-operation of all labourers, *b.* diminishing of labor-turnover and *c.* diminishing of the frequency of strikes, 3. rational dispersion of property.

In order to draw a conclusion concerning profit sharing by labourers, we can make our analysis along three different lines. First, we can inquire into the economic possibility of profit sharing, secondly into the social desirability of profit sharing and thirdly into the general economic effects of profit sharing.

With regard to the economic possibility of profit sharing, we can say that payment to labourers from that part of profit which has a real function, is irrational. As far as profit does not have a real function in business, payment to labourers is rational. We have however to investigate which are the real causes of these profits. High profits can be thought of as a manifestation of too high selling-prices or too low wages. In both cases it is necessary to lower selling prices or to raise wages.

The same reasoning is valid, when we give our attention to the social desirability of profit sharing by labourers. In case of too low wages it is evident that raising wages is an easier and also a better procedure than payments from profits. These payments are dependent on the financial outcome of business. Wages however being a reward for labor-output, have to be fully independent of the financial outcome of business. Moreover we must bear

in mind that payments from profits are causes of fluctuation of the income of labourers, which in their turn cause uncertainty in the maintenance of labor.

If we look at the economic consequences of profit sharing we have to distinguish between the factors from which these profits originate: high selling prices or low wages. The very high profits can be eliminated, first by lowering selling prices. This procedure will cause a rise in the demand of the products of business, so production and employment will be raised. In the case of raising wages demand will be raised too and the same effects will ensue. Although the lowering of profits will cause a diminishing of investments, and therefore a diminishing of income and employment, we must bear in mind, that the ultimate effect will be the raising of consumption and employment.

So our conclusion, drawn from three different ways of reasoning, is that, in stead of paying profits to labourers, profits ought to be lowered. In order to verify this conclusion we recommend investigations on a large scale in: 1. the amounts of profits in business, 2. the real causes from which these profits originate and 3. the effect of lowering profits on employment.

* * *

In the *third* part of our study we analysed the significance for management of sociological and psychological investigations in business. In order to bring out only the main problems involved in these investigations, we made the following classification:

1. the informal organisation of business;
2. the social aspects of selection and placement of functionaries;
3. the meaning of leadership in business.

ad 1. With regard to the informal organisation in business we analysed the critical factors from which the informal organisation originates. These factors are: *a.* those rooted in circumstances out of business (e.g. clerical life, private clubs etc.), *b.* those rooted in business (e.g. different functions which have to be performed) and *c.* different points of view between management and labor.

The factors sub *a* have an exogen character: they cannot be influenced by management; for management these factors are data. The factors sub *b* have an endogen character; principally they can be influenced by management; for management these factors form a real problem. In our opinion the different points of view between labor and management cannot cause a cleavage between both, if

and in so far as the primacy of the economic objective of business is recognised, both by management and labor.

Now it is in our opinion not correct to distinguish between formal and informal organisation in business. We have to distinguish: *a.* the formal organisation, i.e. the organisation as we can gather it from the organisation-chart of business (lines of responsibility, authority and accountability), and *b* the material (actual) organisation, that is the organisation which is realised. The actual organisation can coincide with the formal organisation in business, but a divergence is also possible and will occur frequently. This divergence is caused by exogen and endogen factors. Only endogen factors can be influenced by management. Management has to adapt the actual organisation to the formal organisation if the divergence originates from endogen factors, but the reverse adaptation of the formal organisation to the actual organisation also has to be taken into account. As far as exogen factors are real causes of the difference between actual and formal organisation in business, management cannot easily alter the actual organisation.

In our opinion the significance of the „informal” organisation in business should not be exaggerated. We have to bear in mind the real difference between actual and formal organisation, because only these concepts are in accordance with reality in business life.

ad 2. Like MILLER and FORM we distinguish, in the performance of functions, three components: *a.* the worker, *b* the function and *c.* the workgroup.

With regard to the worker we analysed the social aspects connected with the selection and placement of the functionaries. We emphasized the significance of the socio-dramatic performance test, as being a necessary complement of the technical, aptitude and intellectual tests. We fully agree with MAYO's opinion that psychological tests are intellectually orientated and do not form an adequate basis for selection and placement of functionaries.

With regard to the function we emphasized the social aspects connected with each function, especially social contacts and responsibility which are closely connected with the performance of functions.

Only a careful analysis of social capabilities of the worker — besides his technical and intellectual capabilities — in connection with a careful analysis of social aspects of the function which is to be performed by the worker, creates an adequate instrument for placing the right man in the right place.

With regard to the workgroup our opinion is that sociometric tests, in analysing the interpersonal feelings and relations between all functionaries, are of great significance. Measurement of these interpersonal feelings can be performed by means of investigations in the degree of attraction, rejection and indifference between the functionaries. A sociogrammatic representation of the results of these tests gives a clear picture of the workgroup. Real causes of frictions in the group can be shown by analysis of the sociogram.

ad 3. The process of management has three different aspects. First a technical-organisational aspect, second a financial-economic aspect and finally a human (social) aspect („leadership”). In our opinion the sociological and psychological analysis of leadership is of great importance for business. Essentially leadership is the creation and promotion of all those factors which stimulate the willingness to work. Although formally the subordinates in business *must* follow up the instructions and orders, issued by the management (implied in responsibility, authority and accountability), it is of importance to create such factors that subordinates are willing to follow up these orders.

In order to create these factors, the men who have been called for management in business, have to possess personality, because personality determines the extent in which leaders can inspire their subordinates. Only when he has personality the manager can bear authority and the right of command, because in that case subordinates are willing to follow up instructions and orders.

Especially at the bottom of business organisation personal leadership is of great significance (place of the foreman). Top-management however, bearing the integral responsibility in business, ought to realise the essential significance of the leadership-aspect of management.

Frictions in business organisation are frequently caused by inadequate insight into the real function of leaders and in the leadership aspect of management.

At the end of our study we have made some remarks on the sociometric investigations of MORENO. In our opinion sociometric analyses can contribute much to the well-being of business. We must however keep in view that sociometric investigations can only be fruitfull if they are undertaken with the (full) co-operation of all functionaries, management as well as labor. Moreover we have to realise that the group-structure, as shown by sociometric analyses, can deviate from the structure which originates from the formal

organisation as settled by management. Although in some cases the formal structure ought to be altered in accordance with the sociometric structure, we must, nevertheless, bear clearly in mind, that the economic objective of business has primacy.

In grouping and placing functionaries sociometric analyses can be helpful and adequate instruments. In our opinion we have to reject all autocratic and „laissez faire” methods of placements. Sociometric placement of functionaries can be of great significance in business, because this method of placement contributes to the productivity of work and also to the satisfaction of the labourer. Only by means of sociometric analyses an optimal placement of all functionaries is possible.

A change in a workgroup, caused by replacing of functionaries (in other departments for instance), can be visualised by sociometric analyses. They show the structural effects of change in placement of functionaries. Therefore they contribute to the insight of management in the group-structure.

Finally, sociometric analyses are adequate instruments in determining the extent to which functionaries are capable of performing their work.